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CLAIMS:

1. A dryer for drying particulate material, comprising at least one substantially vertical elongate container having:

an upper inlet for receiving a charge of moisture containing particulate material;

a lower outlet for discharging dried particulate material, whereby said particulate material travels under the influence of gravity from said inlet to said outlet;

at least one substantially vertical gas permeable wall through which a drying gas can pass to contact said particulate material;

said dryer also comprising at least one plenum on an exterior surface of said at least one gas permeable wall, covering ingress and egress openings within said at least one gas permeable wall.

2. The dryer according to claim 1 wherein the at least one gas permeable wall comprises vertically spaced, substantially horizontally oriented slats.

3. The dryer according to claim 1 wherein the at least one gas permeable wall comprises a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, wherein said ingress and egress openings are provided within said permeable leg.

4. The dryer according to any one of claims 1 to 3 comprising two opposed gas permeable walls.

5. The dryer according to claim 4 wherein ingress openings and egress openings are respectively provided in opposed permeable walls.

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6. The dryer according to claim 5 wherein the at least one plenum covering ingress openings comprises at least one inlet and the at least one plenum covering egress openings comprises at least one outlet.
- 5 7. The dryer according to claim 6 wherein the at least one outlet comprises at least one extract duct.
8. The dryer according to either claim 6 or claim 7 wherein drying gas is drawn into the at least one inlet by a circulator.
- 10 9. The dryer according to claim 8 wherein the circulator is an induced draft fan.
10. The dryer according to any one of claims 6 to 9 wherein the at least one plenum is divided into a number of zones of differing air stream properties.
- 15 11. The dryer according to claim 10 wherein direction of drying gas flow through the charge of particulate material is reversed from one plenum zone to an adjacent plenum zone.
- 20 12. The dryer according to any one of claims 6 to 11 wherein a desiccator or refrigerator is provided in conjunction with the at least one outlet to recover water from drying gas exiting the dryer.
- 25 13. The dryer according to any one of claims 1 to 12 having a height to width ratio of at least 3:1.
14. The dryer according to any one of claims 1 to 12 having a height to width ratio of at least 5:1.
- 30 15. The dryer according to any one of claims 1 to 12 having a height to width ratio of at least 10:1.

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16. The dryer according to any one of claims 1 to 15 comprising lateral supporting members joining opposing gas permeable walls.

5 17. The dryer according to claim 16 wherein the supporting members are internal membrane walls that divide the dryer into a plurality of adjacent cells.

18. A cell of a dryer according to claim 17.

10 19. A drying plant comprising:

(a) a conditioning bed for subjecting moisture containing particulate material to surface conditioning;

15 (b) at least one conveyer for conveying said surface conditioned material to an inlet of a dryer according to any one of claims 1 to 17;

(c) a collection surface for retrieving dried particulate material from the dryer; and

20 (d) a particulate material remover for removing dried particulate material from said collection surface.

20. The drying plant according to claim 19 further comprising a compactor for production of brown coal containing compacted bodies.

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21. The drying plant according to claim 20 wherein the compactor comprises a mixing/conditioning device and a pelletiser.

22. A dryer for drying pellets containing brown coal comprising at least one  
30 substantially vertical elongate container having:

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an upper inlet for receiving a charge of brown coal containing pellets;

a lower outlet for discharging dried pellets of brown coal, whereby said pellets travel under the influence of gravity from said inlet to said outlet;

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two opposing substantially vertical gas permeable walls through which a drying gas can pass to contact said pellets;

10 said dryer also comprising plenums on external surfaces of the gas permeable walls covering ingress and egress openings within the gas permeable walls, wherein the plenums are divided into zones of differing air stream properties and wherein the direction of drying gas flow through the charge of brown coal containing pellets is reversed from one plenum zone to an adjacent plenum zone; the dryer comprising lateral internal membrane walls joining opposing gas permeable walls that divide the dryer into a plurality of adjacent cells.

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23. A method of drying brown coal which comprises introducing brown coal fines into a drying plant according to any one of claims 19 to 21.

24. A dryer substantially as hereinbefore described with reference to the drawings.

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25. A drying plant substantially as hereinbefore described with reference to the drawings.

## ARTICLE 19 AMENDMENT

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## CLAIMS:

1. A dryer for drying particulate material, comprising at least one substantially vertical elongate container having:

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an upper inlet for receiving a charge of moisture containing particulate material;

a lower outlet for discharging dried particulate material, whereby said particulate material travels under the influence of gravity from said inlet to said outlet;

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two substantially vertical and opposed gas permeable walls through which a drying gas can pass to contact said particulate material;

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said dryer also comprising plenums on exterior surfaces of said gas permeable walls, covering ingress and egress openings within said gas permeable walls, wherein the plenums are divided into zones of differing air stream properties.

2. The dryer according to claim 1 wherein the gas permeable walls comprise vertically spaced, substantially horizontally oriented slats.

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3. The dryer according to claim 1 wherein the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, wherein said ingress and egress openings are provided within said permeable leg.

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4. The dryer according to any one of claims 1 to 3 wherein ingress openings and egress openings are respectively provided in opposed permeable walls.

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5. The dryer according to claim 4 wherein a plenum covering ingress openings comprises at least one inlet and a plenum covering egress openings comprises at least one outlet.

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6. The dryer according to claim 5 wherein the at least one outlet comprises at least one extract duct.
- 5 7. The dryer according to either claim 5 or claim 6 wherein drying gas is drawn into the at least one inlet by a circulator.
8. The dryer according to claim 7 wherein the circulator is an induced draft fan.
- 10 9. The dryer according to any one of claims 1 to 8 wherein direction of drying gas flow through the charge of particulate material is reversed from one plenum zone to an adjacent plenum zone.
10. The dryer according to any one of claims 5 to 9 wherein a desiccator or refrigerator  
15 is provided in conjunction with the at least one outlet to recover water from drying gas exiting the dryer.
11. The dryer according to any one of claims 1 to 10 having a height to width ratio of at least 3:1.
- 20 12. The dryer according to any one of claims 1 to 10 having a height to width ratio of at least 5:1.
13. The dryer according to any one of claims 1 to 10 having a height to width ratio of  
25 at least 10:1.
14. The dryer according to any one of claims 1 to 13 comprising lateral supporting members joining opposing gas permeable walls.
- 30 15. The dryer according to claim 14 wherein the supporting members are internal membrane walls that divide the dryer into a plurality of adjacent cells.

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16. A cell of a dryer according to claim 15.

17. A drying plant comprising:

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(a) a conditioning bed for subjecting moisture containing particulate material to surface conditioning;

(b) at least one conveyer for conveying said surface conditioned material to an inlet of a  
10 dryer according to any one of claims 1 to 15;

(c) a collection surface for retrieving dried particulate material from the dryer; and

(d) a particulate material remover for removing dried particulate material from said  
15 collection surface.

18. The drying plant according to claim 17 further comprising a compactor for production of brown coal containing compacted bodies.

20 19. The drying plant according to claim 18 wherein the compactor comprises a mixing/conditioning device and a pelletiser.

20. A dryer for drying pellets containing brown coal comprising at least one substantially vertical elongate container having:

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an upper inlet for receiving a charge of brown coal containing pellets;

a lower outlet for discharging dried pellets of brown coal, whereby said pellets travel under the influence of gravity from said inlet to said outlet;

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two opposing substantially vertical gas permeable walls through which a drying gas can pass to contact said pellets;

said dryer also comprising plenums on external surfaces of the gas permeable walls covering ingress and egress openings within the gas permeable walls, wherein the plenums are divided into zones of differing air stream properties and wherein the direction of drying gas flow through the charge of brown coal containing pellets is reversed from one plenum zone to an adjacent plenum zone; the dryer comprising lateral internal membrane walls joining opposing gas permeable walls that divide the dryer into a plurality of adjacent cells.

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21. A method of drying brown coal which comprises introducing brown coal fines into a drying plant according to any one of claims 17 to 19.

22. A dryer substantially as hereinbefore described with reference to the drawings.

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23. A drying plant substantially as hereinbefore described with reference to the drawings.